



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/580,976

05/31/2006

Jens Foegler

03/102 K

9269

38263

7590

09/30/2009

PROPAT, L.L.C.

425-C SOUTH SHARON AMITY ROAD

CHARLOTTE, NC 28211-2841

EXAMINER

JACOBSON, MICHELE LYNN

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

09/30/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/580,976	Applicant(s) FOEGLER ET AL.	
	Examiner MICHELE JACOBSON	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/13/09 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 6 and 27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

4. Claim 6 has been amended to recite the limitation "wherein the protein consists of gelatin, collagen, casein, gluten, zein, ardein, pea protein, cottonseed protein and or fish protein". However, there is no support in applicant's originally filed specification for

Art Unit: 1794

the recitation of "consists of". Therefore, applicant's amendment constitutes new matter.

5. Claim 27 is newly added and recites the limitation "wherein the coating has a coating weight of 10 to 200 g/m²". However, applicant's originally filed specification only recites that the *casing* can have a weight of 10 to 200 g/m², not that this is the weight of the *coating*. Therefore, newly added claim 27 constitutes new matter.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-4, 6, 8-15, 19 and 23-26 rejected under 35 U.S.C. 102(b) as being anticipated by Hammer et al. WO98/34490 (U.S. Patent No. 6,902,783 used herein for translation and reference, hereafter referred to as Hammer).

8. Hammer teaches an edible shaped body in the form of a flat or tubular film based on plastifiable biopolymers or cleavage products or derivatives thereof and/or synthetic polymers of natural monomers. (Col. 1, lines 52-55) Preferred examples of the plastifiable biopolymers include extrudable gelatins and other natural proteins, alginic acids and alginates and carrageenan. (Col. 2, lines 38-46) The content of the biopolymers is generally from 10% to 90% by weight based on the total weight of the

Art Unit: 1794

shaped body. (Col. 2, lines 54-58) Preferably, two or more of the starting biopolymers are used together. (Col. 2, lines 59-60) They are expediently uniformly mixed and plastified at relatively high temperatures by relatively long kneading in a twin-screw extruder in the presence of a plasticizer, a plasticizing aid (=lubricant), a hardener (=crosslinker) and, if appropriate, a filler. (Col. 2, lines 60-64) The composition is also recited to include pigments. (Claim 13)

9. Hardeners or crosslinkers which can be used include caramel (caramelized sugar, maillose) and dialdehydes (especially glyoxal and glutardialdehyde). (Col. 3, lines 14-17) The content of crosslinkers is generally from 0.2 to 30% by weight. (Col. 3, line 27)

10. The tubes are recited to be extruded and can be treated internally and externally to modify their properties. Generally, the tubes are gathered in sections and the resultant shirred sticks are processed on conventional machines. The seamless tubular films are particularly suitable as sausage casings, in particular for small sausages. In addition, the shaped bodies of the invention are also suitable for packaging other foods, e.g. cheese. (Col. 4, lines 33-47) The composition of the invention may also be utilized in a multilayer film including three layers wherein a fibrous polymer pulp is extruded into two fiber-free layers. (Col. 3, lines 55-57)

11. In another embodiment, a thermoplastic sheet was produced from the inventive composition which was used to wrap meat products such as cooked ham. The sheet was also recited to be covered with a net for cooking the ham which presumably provided additional reinforcement. (Col. 5, lines 30-35) The film was recited to be

Art Unit: 1794

oxygen and smoke permeable while having low liquid and fat permeability. (Col. 5, lines 33-35)

12. The embodiment of Hammer in which a fibrous polymer pulp is extruded into two fiber free layers is interpreted by the examiner to read on the fibrous support web reinforcement coated with a film forming protein as claimed in claims 1 and 25. The fibrous polymer pulp recited by Hammer is also reasonably broadly interpreted to read on the consolidated nonwoven recited in claim 2. Therefore, Hammer anticipates the tubular fibrous support web coated with a protein coating wherein the protein consists of gelatin, casein or wheat protein for use as a sausage casing claimed in claims 1, 2, 4, 6, 23 and 25.

13. Regarding claims 3 and 19: since the reinforcement layer of Hammer is recited to be a fibrous polymer pulp, the coating material is reasonably interpreted to permeate the support and impregnate it both internally and externally.

14. Regarding claims 7 and 26: Hammer recites that the protein is present in an amount of from 10% to 90% by weight based on the total weight of the composition which anticipates points within the ranges claimed in claims 7 and 26.

15. Regarding claims 8, 10 and 11: Hammer recites that the composition preferably comprises two or more plastifiable biopolymers. Alginate and carrageenan (a branched polysaccharide) are recited to be useful plastifiable biopolymers along with gelatin. While Hammer does not specifically disclose that alginate and carrageenan act as plasticizers, they are the same compounds claimed by applicant as plasticizers and

Art Unit: 1794

therefore would be expected to perform the same function. Therefore, the composition recited by Hammer is the same as the claimed in claims 8, 10 and 11.

16. Regarding claims 13 and 14: Hammer specifically recites caramel, glyoxal and glutardialdehyde as crosslinkers.

17. Regarding claim 15: Hammer specifically recites that pigments may be used as claimed in claim 15.

18. Regarding claim 24: Hammer clearly recites that the casing can be shirred. The examiner takes official notice that it is well known in the sausage art to provide means for separating individual sausage links that include metal or plastic clips, tying and sewing. One having ordinary skill in the art at the time the invention would have immediately envisaged utilizing any one of these techniques to separate the sausage links produced using the sausage casing of Hammer.

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 1-8, 10-17 and 19-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hammer et al. WO98/34490 (U.S. Patent No. 6,902,783 used herein

Art Unit: 1794

for translation and reference, hereafter referred to as Hammer) and Bradshaw et al.

U.S. Patent No. 3,494,772 (hereafter referred to as Bradshaw).

21. Hammer teaches what has been recited above but is silent regarding the weight of the reinforcement, the fraction of the further natural or synthetic polymer, the fraction of dye or pigment, the use of a protein free layer, a longitudinally seamed casing and the method of producing such a casing, the coating weight and the water vapor permeability of the resulting casing.

22. Bradshaw teaches an edible, fibrous, protein casing comprising edible, fibrous collagen and edible alginate for use as a sausage casing that is homogenous and strong. (Col. 1, lines 46-58)

23. Both Hammer and Bradshaw are directed to edible sausage casings comprising alginate. Hammer discloses that it is necessary in some instances to provide a fibrous reinforcement to the material of the invention which can include fillers such as leather shavings (i.e. collagen). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the edible, fibrous protein casing disclosed by Bradshaw for the fibrous reinforcement recited by Hammer since the casing of Bradshaw is recited to be strong and is made from similar materials to the fiber reinforcement disclosed by Hammer. The production of a casing combining the layers recited by Hammer and Bradshaw would have produced the same invention claimed in claims 1-4, 6, 8-15, 19 and 23-26.

24. Regarding claim 5: Bradshaw does not recite a weight for the fibrous casing to be used as a reinforcement disclosed. However, it would have been obvious to one

Art Unit: 1794

having ordinary skill in the art at the time the invention was made to have selected a fibrous reinforcing layer with an appropriate weight depending on the amount of strength required. The obvious optimization of the weight of the reinforcing layer would have produced the same invention as claimed in claim 5.

25. Regarding claims 8 and 10-12: Hammer recites that the composition preferably comprises two or more plastifiable biopolymers. Alginate and carrageenan (a branched polysaccharide) are recited to be useful plastifiable biopolymers along with gelatin. While Hammer does not specifically disclose that alginate and carrageenan act as plasticizers, they are the same compounds claimed by applicant as plasticizers and therefore would be expected to perform the same function. Therefore, the composition recited by Hammer is the same as the claimed in claims 8, 10 and 11. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have optimized the ratio of gelatin to alginate or carrageenan. Hammer teaches that previously it had not been possible to give alginate based sausage casings the stability necessary. Owing to the action of the sausage emulsion and brine the poorly soluble calcium salt is gradually converted into the readily soluble sodium salt of alginic acid. Alginate casings as a result lose their strength. (Col. 1, lines 29-34) In light of this teaching, one of ordinary skill would not have sought to employ alginate as the majority plastifiable biopolymer and would have utilized it in amounts that were less than 50%. The obvious use of alginate in amounts less than 50% would have produced the invention claimed in claim 12.

Art Unit: 1794

26. Regarding claim 16: Hammer specifically recites that pigments may be used as claimed in claim 15. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have optimized the amount of pigment or dye used depending on the intensity of the resulting color desired. Such an optimization of the amount of pigments would have produced the invention as claimed in claim 16.

27. Regarding claim 17: The examiner takes official notice multilayer sausage casings are universally known in the sausage casings arts comprising layers that do not comprise proteins. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have disposed an additional non-protein barrier layer or protective layer to the casing produced by the combination of Hammer and Bradshaw which would have produced the same invention as claimed in claim 17.

28. Regarding claims 3, 19 and 20-22: While the composition disclosed by Hammer is recited to be extruded, one of ordinary skill would have recognized that it could also be utilized as a coating composition for a casing as disclosed by Bradshaw. The examiner takes official notice that it is well known in the sausage casing art that tubular casings may either be formed seamlessly by coextrusion of the layers or they may be formed with a seam by forming an extruded sheet into a tubular shape. Instead of extruding the inventive composition of Hammer as a tube, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have applied it as a coating to sheet of reinforcing material. The coating could then be said to impregnate the fabric material and would permeate the fabric material. This would have been the same as the invention claimed in claims 3 and 19. The obvious formation of

Art Unit: 1794

this impregnated sheet into a tubular casing would have produced a casing with one longitudinal seam which is the same as the invention claimed in claim 20. Such a tube would have been produced by the same method as that claimed in claim 22.

Additionally, the examiner takes official notice that it is well known in the sausage casing art to support preformed tubular casings with air so that they may be internally or externally coated. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have supported a preformed reinforcing fabric tubular article with air while coating it with the composition recited by Hammer. The obvious utilization of this method step would have produced a method the same as that claimed claim 21.

29. Regarding claim 27: Depending on the amount of structural integrity to be provided by the casing layer taught by Hammer, one of ordinary skill would have varied the result effective variable of thickness to obtain the desired strength. This obvious optimization of coating thickness would have produced a casing with a protein layer coating weight as claimed in claim 27. The casing produced by the combination of Hammer and Bradshaw would have a water vapor permeability within the range claimed by applicant since it is made from the same materials disclosed to be useful by applicant. Furthermore, it is well known in the sausage casing art to provide porosity or barrier layers depending on the amount of permeability desired for a sausage casing. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have optimized these properties by providing porosity or a barrier layer to the casing produced by the combination of Hammer and Bradshaw depending on the

Art Unit: 1794

amount of vapor permeability desired. Such an obvious modification would have produced the same water vapor permeability as claimed in claim 27.

30. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hammer et al. WO98/34490 (U.S. Patent No. 6,902,783 used herein for translation and reference, hereafter referred to as Hammer) and Gord et al. U.S. Patent Application Publication No. 2002/0064580 (hereafter referred to as Gord).

31. Hammer teaches what has been recited above but is silent regarding the addition of polyvinyl acetate or polyacrylate.

32. Gord teaches a cellulose fiber based sausage casing coated with a solution comprising a protein such as gelatin and other additives. (Para. 18, 19) Polyvinyl acetate and polyacrylate are recited to be useful additives for the protein solution because they impart higher smoke permeability to the casing. (Para. 21)

33. Hammer and Gord are both directed towards sausage casings comprising protein based films. One of ordinary skill would have been motivated to utilize polyvinyl acetate or polyacrylate as an additional additive in the composition recited by Hammer in order to impart higher smoke permeability to the casing. The obvious use of polyvinyl acetate or polyacrylate as an additive in the composition of Hammer in order to increase the smoke permeability of the casing would have produced the invention claimed in claim 9.

34. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hammer et al. WO98/34490 (U.S. Patent No. 6,902,783 used herein for translation and reference, hereafter referred to as Hammer) and Jon et al. U.S. Patent No. 5,955,126 (hereafter referred to as Jon).

35. Hammer teaches what has been recited above but is silent regarding the addition of a polyvinylidene chloride copolymer layer.

36. Jon teaches a polyvinylidene chloride copolymer coated fiber reinforced cellulose casing coated with a solution comprising a protein. (Claims 1 and 6)

37. Hammer and Jon are all directed towards sausage casings. As stated above, it is universally known in the sausage casing arts to utilize multilayer casings. Jon evidences that polyvinylidene chloride layers were known to be useful in combination with protein coated reinforced casings. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized a polyvinylidene chloride layer as an additional layer in the casing recited by Hammer. The utilization of such a layer would have produced the casing as claimed in claim 18.

Response to Arguments

38. Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELE JACOBSON whose telephone number is (571)272-8905. The examiner can normally be reached on Monday-Thursday 8:30 AM-7 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571)272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michele L. Jacobson
Examiner /M. J./
Art Unit 1794

/Rena L. Dye/
Supervisory Patent Examiner, Art Unit 1794